

**PATENT APPLICATION OF****ANNIE CHENG****FOR****10 HORIZONTAL SCROLLING MOUSE****BACKGROUND-FIELD OF INVENTION**

The present invention relates to a computer accessory for controlling the cursor and the  
15 viewing window on a computer monitor. More specifically, the present invention relates to a  
mouse that controls the cursor and the viewing window on a computer monitor.

**BACKGROUND-DESCRIPTION OF RELATED ART**

A basic computer system comprises of the central processing unit (CPU), memories,  
20 video graphic card, sound card, motherboard, and various peripheral input and output devices  
such as monitor, keyboard, mouse, modem, scanner, and printer. Input and output devices are  
necessary for the user to communicate with the computer. The input devices communicate  
information and commands from the user to the computer, and the output devices communicate

information from the computer to the user. A software, generally known as the operating system, is used to control the communications between the user and the computer as well as between the computer and the various peripheral devices connected to it. The most common operating system in use today is the Microsoft Windows operating system.

5       A keyboard and a mouse are the most common form of input devices. The keyboard is generally used to input text and execute commands. The mouse is generally used to control the movement of a cursor and to select items shown on the monitor. In the Microsoft Windows operating system, the mouse is an indispensable input device. It performs various crucial functions such as moving the cursor, selecting various functions, and scrolling the image on the 10 screen.

The most common type of mouse for use with the Microsoft Windows operating system comprises of a rounded body with two or more buttons on top for selection of items on the screen, a wheel between the buttons for scrolling the image on the screen vertically, and a roller ball under the rounded body that translates the movement of the mouse into x and y coordinates 15 for controlling the cursor on the screen. In some mouse, an optical system is used in place of the roller ball to translate the movement of the mouse into x and y coordinates. The mouse is usually connected to the computer with a wire. Some mouse use wireless transmitter and receiver to connect the mouse to the computer thereby eliminating the wire between the mouse and the computer.

20       The user moves the mouse in a horizontal plane on the tabletop. The movement of the mouse is translated into x and y coordinates and inputted into the computer to control the movement of a cursor on the screen. If an image is too large to be displace all at once on the screen, a vertical and/or a horizontal scroll bar with scroll buttons will appear to allow the user to

scroll the viewing window to view different parts of the image. The wheel between the buttons may be used to scroll the image vertically but the user must either drag the horizontal scroll bar or click on the horizontal scroll buttons to move the viewing window horizontally to view different parts of the image.

5 On some mouse, the keys may be user programmed to perform various functions but the programming of the buttons are often complicated and difficult to perform. Therefore, most of these “programmable” buttons are usually not programmed by the user to perform any function other than the default selection function.

## 10 SUMMARY OF THE INVENTION

The present invention is a mouse with built-in buttons for easily scrolling the viewing window on a computer monitor without having to drag the horizontal scroll bar or click on the horizontal scroll buttons on the screen. The mouse comprises of two selection buttons with a scrolling wheel between the two buttons and two buttons that are preprogrammed to perform the functions of scrolling the viewing window on the computer monitor horizontally left and right. The buttons may also be programmed to customize them to perform any desired functions.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows the top view of the horizontal scrolling mouse with the built-in 20 preprogrammed buttons for scrolling the viewing window horizontally on the screen.

Figure 2 shows a schematic diagram of the micro processor circuit in the horizontal scrolling mouse.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Figure 1 shows the preferred embodiment of the present invention. The preferred embodiment of the horizontal scrolling mouse comprises of a housing **1** with a right selection button **2**, a left selection button **2**, a scrolling wheel **3**, a preprogrammed right scrolling button **4**, and a preprogrammed left scrolling button **5** arranged on the top of the housing **1** for operation by an user's hand. The mouse may use either a roller ball or an optical system to translate the coordinates of the mouse movements to the computer. The mouse may be connected to the computer with either a wire or a wireless transmitter **6** and receiver.

A micro processor chip is affixed within the housing **1** of the mouse to detect the pressing 10 of the buttons **2**, **4**, **5**, the rotation of the scrolling wheel **3**, and the relative movements of the mouse and processes and transfers these signals to the computer. Figure 2 shows a schematic diagram of the micro processor in the mouse.

In the preferred embodiment of the mouse, the preprogrammed right scrolling button **4** and the preprogrammed left scrolling button **5** are preprogrammed to perform their specific 15 functions. These functions may also be changed by the user using software to perform other desired functions. The right selection button **2** and the left selection button **2** are preprogrammed to perform the selection function. The scrolling wheel **3** is preprogrammed to perform vertical scrolling of the documents being edited. In using the present invention, the movement of the mouse is greatly minimized due to the easily accessible and conveniently located right and left 20 scrolling buttons on the horizontal scrolling mouse. The right and left scrolling buttons eliminates the necessity to locate the horizontal scrolling bar and the horizontal scrolling buttons and greatly increase the speed of viewing and editing an image.

Although the description above contains many specificities, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. Thus the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the examples given.

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